

Information regarding

**LCOS Software Release 4.02**

for LANCOM Routers and Wireless LAN Access-Points

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## 1. Introduction

LCOS („LANCOM Operating System“) is the operating system for all Wireless LAN Access Points and Routers. In the context of the hardware given by the products the at a time latest LCOS version is available for all LANCOM products and is available free of charge for download from LANCOM Systems.

This document describes the innovations within LCOS software release 4.02 as well as the modifications since release 3.52.

### Note

**Devices with firmware equal and newer LCOS 4.0 do have activated WEP128 encryption when reset to factory settings.**

**The standard key is: L<device's MAC-Address> (e.g. L00A0570FC91E).**

**Further information can be found in the installation guide and in the LCOS 4.0 reference manual.**

## 2. New features, modifications and history

### **LCOS modifications from 4.00.0067 -> 4.02.0003**

#### **Corrections/modifications:**

- Changes in backup management

### **LCOS modifications from 3.52.0012 -> 4.00.0067**

#### **new Features:**

- RIP may now be used on WAN connections
- WPA passphrases may now be configured per client and P2P remote station
- new MTU list for defining an MTU for a remote station. The defined MTU will be used even if there is another MTU negotiated in PPP
- VPN status- and ICMP-traces now showing the IP-address used for line polling
- it is now possible to specify a target MAC address within the protocol filters table  
This can be used to restrict traffic to a particular station inside the LAN
- VLAN functionality may now be switched globally
- wildcards (e.g. WLAN-1-\*) may now be used within the port lists (VLAN or protocol filters).
- using a RADIUS server a backup server may now be specified
- extended rights management for WEBconfig/Telnet
- SMTP now supporting authentication method „LOGIN“
- WLAN compression support for optimizing the transfer rate
- it is now possible to use more than one PPPoE connection per physical DSL line.
- IKE config mode support for allocating an IP address to a VPN remote station
- it is now possible to specify up to eight additional gateways to realize load-balancing and/or improve reliability.
- support for SSH remote access
- support for static port mapping on masked connections
- it is now possible to configure 16 so called „loopback addresses“. These addresses are further IPs for accessing the LANCOM router

## Corrections/modifications:

### WLAN:

- Please be aware that resetting the device to factory standard now activates WLAN encryption with WEP128. The standard key is as follows: L<device's MAC-Address> (e.g. L00A0570FC91E)
- in public spot point to point scenarios it is now possible to reach access points on the other side of the transmission paths, even if authentication is activated for these paths
- station monitoring now also working with clients being in key-exchange
- signal strength in WLAN menus (e.g. station table, access point list) now being put out as integer values; thus providing the opportunity of reporting to third-party software
- definition of a start page on a public web server does no longer result in nested frames

### VPN:

- improved VPN reliability
- optimized VPN connection establishment when using more than 50 VPN remote sites

### Miscellaneous:

- failure in polling will now initiate the backup connection if the polling table is used
- possible self-allocation of the LANCOM router via DHCP as the secondary DNS- and/or secondary NBNS server
- DNS requests from a local DNS server to the LANCOM router will no longer be sent back to the local DNS server. This is to prevent DNS packet loops.
- firewall table comments will no longer be lost after reboot
- in case of disconnecting an ISDN backup because of the main connection being available again, the main connection will be re-established immediately if keepalive is configured.
- optimized Quality of Service (QoS) behaviour
- RIP-, SAP- and ARP-tables are no longer limited to 128 entries but are handled dynamically
- trace display improved for better debugging
- significantly reduced memory requirements of used firewall rules for better stability
- revised login handling now operates individually for each interface (LANconfig, WEBconfig, Telnet)
- TFTP access (e.g. LANconfig) no longer leads to sessions staying open, which had the effect of preventing further access

## 3. Remarks

If you want to upgrade the firmware of your device to a new version, please install the latest LANtools first. **Before running the firmware-upload you should save the router configuration to a file.** After that you can use LANconfig to load the latest LCOS-version into the device.

In principle, we suggest upgrading the firmware of your device only if you are in need of the latest features.

Please note that different firmware files might be available for your device. Further information can be found in the file README.PDF in the download area of our homepage.